

### Abstract of Disclosure

## **SWITCHING APPARATUS FOR HIGH SPEED CHANNELS USING MULTIPLE PARALLEL LOWER SPEED CHANNELS WHILE MAINTAINING DATA RATE**

Switching apparatus is provided for example for a high data rate internet switching system using fiber optic channels where the switching elements which are a portion of a switching fabric of the switching apparatus necessarily operate at a significantly lower data rate. Data packets are routed from ingress to egress ports over a single serial link. This is provided by the process of storing the high rate data temporarily in memory in an ingress port and then downloading it at a lower rate in a complete data packet to one designated switch element and almost immediately switching the next data packet that has been received in the ingress port to the next switch element. The switch element configuration provides an automatic redundancy even if one element fails.